

## **Storm Water Data Report (SWDR)**

In general, a Storm Water Data Report (SWDR) shall be prepared for every project. Depending upon the extent of soil disturbance and degree of storm water impacts, a “Long Form” or “Short Form” SWDR shall be required. Projects that do not have the potential to create storm water impacts, and have little or no soil disturbance (less than 0.1 hectare) may utilize the “Short Form” SWDR. A Short Form SWDR may be appropriate for (but not limited to) the following types of projects:

- Signing and striping projects;
- Weigh-in-motion projects;
- Traffic monitoring projects (closed-circuit camera installation, etc.);
- Construction of ADA ramps;
- Bridge rail projects;
- Chip seal and/or fog seal projects;
- Pavement marker projects (raised or depressed);
- Metal Beam Guardrail Projects;
- Loop detector installations;
- Median Barrier Projects;
- Extended plant establishment projects,
- Emergency projects\* using informal bids (as defined per PDPM); and
- Building remodeling or refurbishment such as painting, tile, or plumbing repair.

Please note that all the aforementioned project types may still be required to utilize a “Long Form” Storm Water Data Report if meeting the following conditions:

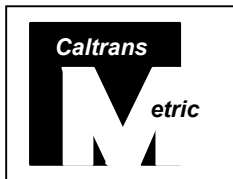
1. The Project is required to consider Treatment BMPs.
2. The project disturbs more than 0.1 hectares of soil.
3. The project is part of a Common Plan of Development.
4. The project potentially creates permanent water quality impacts.
5. The project requires a notification of ADL reuse.

Any exceptions must be under the direction of the Design District/Regional Storm Water Coordinator.

The Licensed Person in responsible charge of the project (either the Project Engineer or the Licensed Landscape Architect) determines whether a project qualifies and may utilize a Short Form SWDR based upon the previously identified criteria. During the Project Initiation phase, the Design District/Regional Storm Water Coordinator shall confirm that the project may appropriately utilize the Short Form SWDR. The applicability of the Short Form will be reviewed and changed (if necessary) during the Project Approval and PS&E phases.

\* Note that an Emergency Project done under Force Account does not require a SWDR.





Dist-County-Route

Kilometer Post (Post Mile) Limits

Project Type

EA: \_\_\_\_\_

RU: \_\_\_\_\_

Program Identification: \_\_\_\_\_

Phases: ☐ PID

☐ PA/ED

☐ PS&E

**Regional Water Quality Control Board(s):** \_\_\_\_\_

1. Is the project required to consider incorporating Treatment BMPs? Yes ☐ No ☐
2. Does the project disturb more than 0.1 hectares of soil? Yes ☐ No ☐
3. Is the project part of a Common Plan of Development? Yes ☐ No ☐
4. Does the project potentially create permanent water quality impacts? Yes ☐ No ☐
5. Does the project require a notification of ADL reuse? Yes ☐ No ☐

**If the answer to any of the preceding questions is “Yes”, prepare a Long Form - Storm Water Data Report.**

Estimated Construction Start Date: \_\_\_\_\_ Construction Completion Date: \_\_\_\_\_

Separate Dewatering Permit (if yes, permit number) Yes ☐ Permit # \_\_\_\_\_ No ☐ N/A ☐

*This Short Form - Storm Water Data Report has been prepared under the direction of the following Licensed Person. The Licensed Person attests to the technical information contained herein and the data upon which recommendations, conclusions, and decisions are based. Professional Engineer or Landscape Architect stamp required at PS&E.*

\_\_\_\_\_  
[Name], Registered Project Engineer/Landscape Architect Date

*I have reviewed the storm water quality design issues and find this report to be complete, current, and accurate:*

STAMP  
[Required for PS&E only]

\_\_\_\_\_  
[Name], District/Regional SW Coordinator or Designee Date



**1. Project Description**

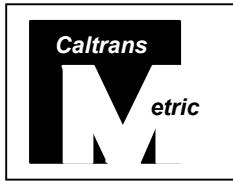
- Clearly describe the type of project and major engineering features, including a brief explanation why project does not have the potential to create water quality impacts.
- Quantify total disturbed soil area and describe how it was calculated.
- Provide any additional information that may be pertinent to the project (e.g. TMDLs, High Risk areas, 303(d) water bodies, 401 certifications, etc.).

**2. Construction Site BMPs**

- Identify whether the project requires a WPCP or SWPPP.
- Coordinate with Construction to determine the appropriate selection of Construction Site BMPs being implemented into the contract documents (e.g. separate line items and/or lump sum).
- Summarize those Construction Site BMPs that have been designated as separate Bid Line Items.
- Describe any pertinent details from the strategy used for estimating Construction Site BMPs.
- Document coordination effort to get concurrence from Construction regarding the Construction Site BMP strategy and associated quantities (provide names of staff and date of meeting(s)). Attach a copy of the Construction Site BMP Consideration Form to the SWDR at PS&E.

**REQUIRED ATTACHEMENTS**

- Vicinity Map
- Evaluation Documentation Form
- Construction Site BMP Consideration Form (required at PS&E only)



Dist-County-Route \_\_\_\_\_  
 Kilometer Post (Post Mile) Limits \_\_\_\_\_  
 Project Type \_\_\_\_\_  
 EA: \_\_\_\_\_  
 RU: \_\_\_\_\_  
 Program Identification: \_\_\_\_\_  
 Phase: ☐ PID ☐ PA/ED ☐ PS&E

**Regional Water Quality Control Board(s):** \_\_\_\_\_

Is the project required to consider incorporating Treatment BMPs? Yes ☐ No ☐

If yes, can Treatment BMPs be incorporated into the project? Yes ☐ No ☐

If No, a Technical Data Report must be submitted to the RWQCB  
 at least 30 days prior to Advertisement. List submittal date: \_\_\_\_\_

Total Disturbed Soil Area: \_\_\_\_\_

Estimated: Construction Start Date: \_\_\_\_\_ Construction Completion Date: \_\_\_\_\_

Notification of Construction (NOC) Date to be submitted: \_\_\_\_\_

Notification of ADL reuse (if Yes, provide date) Yes ☐ Date \_\_\_\_\_ No ☐

Separate Dewatering Permit (if Yes, permit number) Yes ☐ Permit # \_\_\_\_\_ No ☐

***This Report has been prepared under the direction of the following Licensed Person. The Licensed Person attests to the technical information contained herein and the data upon which recommendations, conclusions, and decisions are based. Professional Engineer or Landscape Architect stamp required at PS&E.***

\_\_\_\_\_  
 [Name], Registered Project Engineer/Landscape Architect Date

***I have reviewed the storm water quality design issues and find this report to be complete, current, and accurate:***

\_\_\_\_\_  
 [Name], Project Manager Date

\_\_\_\_\_  
 [Name], Designated Maintenance Representative Date

\_\_\_\_\_  
 [Name], Designated Landscape Architect Representative Date

STAMP  
 [Required for PS&E only]

\_\_\_\_\_  
 [Name], District/Regional SW Coordinator or Designee Date



## **STORM WATER DATA INFORMATION**

### **1. Project Description**

- Clearly describe the type of project and major engineering features.
- Quantify total disturbed soil area and describe how it was calculated.
- Identify all urban MS4 areas within the project limits.

### **2. Define Site Data and Storm Water Quality Design Issues (refer to Checklists SW-1, SW-2, and SW-3)**

*Project Engineer (PE) should confer with NPDES Coordinator, Landscape Architecture, Maintenance, Hydraulics, Construction and Environmental Units to define design issues. Provide a narrative that contains pertinent information from source documents identified on SW-1 (e.g. Preliminary Geotechnical Report [PGR]) and a summary of the answers to the questions in SW-2 and SW-3. Use the bullets listed below as examples of information that should be described in the narrative. Note, not all of the information listed is available at each phase of a project (document status of availability, as appropriate). Information to be included will depend on the nature of the project and the site conditions.*

- Identify Receiving Water Bodies (including the Hydrologic Area or sub-area [name and/or number]) and distance from the project's outfalls
- Identify if any of the Receiving Water Bodies are on the 303(d) list / describe Pollutants of Concern
- Identify if 401 certification is required
- Identify any High Risk Areas within project limits
- Describe RWQCB special requirements/concerns, including TMDLs or effluent limits
- Describe local agency requirements/concerns
- Describe project design considerations (climate, soil, topography, geology, groundwater, right-of-way requirements, slope stabilization, etc.)
- Include soil classifications and geology information, if pertinent.
- Identify if project involves reuse of soil containing Aerially Deposited Lead (ADL)
- Right-of-way costs for BMPs
- Measures for avoiding or reducing potential storm water impacts
- Identify any existing Treatment BMPs within the project limits and their association with the project

### **3. Regional Water Quality Control Board Agreements**

*The District/Regional NPDES coordinator will furnish information and language for this part of the Checklist.*

- Summarize any key negotiated understandings or agreements with RWQCB pertaining to this project. This would include any discussions relating to 401 Certifications.
- Document any specific meeting dates and contact names that reference the negotiated understandings and/or agreements. (Communication with the RWQCB is coordinated through the District/Regional Storm Water Coordinator.)

### **4. Describe Proposed Design Pollution Prevention BMPs to be used on the Project.**

*Summarize responses to Checklist DPP-1, Parts 1-5 in a short narrative. Use the sub-headings shown below for the type of information that should be described in the narrative. Note, not all of the bulleted information listed is required or available at each phase of a project. Information to be included will depend on the nature of the project and the site conditions.*

*Develop an estimate of quantities and costs for the erosion control/revegetation portion of the Design Pollution Prevention BMPs as part of the for the Storm Water BMP Cost Summary; include right of way costs if additional right of way is needed for erosion control. Complete for each phase of the project.*

**Downstream Effects Related to Potentially Increased Flow, Checklist DPP-1, Parts 1 and 2**

- Velocity or volume of downstream flow
- Existing vs. Post Construction Conditions
- Channel condition and design (e.g., will the project discharge to unlined channels)
- Increased sediment loading potential
- Hydraulic changes (realignment, encroachment, etc.)

**Slope/Surface Protection Systems, Checklist DPP-1, Parts 1 and 3**

- Cut and fill requirements
- Existing and proposed slope conditions
- Vegetated surfaces (plants, soils, mulch, blankets, establishment periods, etc.)
- When required, provide date of approval of the Erosion Control Plan by Landscape Architecture and Maintenance
- Hard surfaces (rock blankets, paving)

**Concentrated Flow Conveyance Systems, Checklist DPP-1, Parts 1 and 4**

- Briefly describe the Concentrated Conveyance Systems to be implemented for this project

**Preservation of Existing Vegetation, Checklist DPP-1, Parts 1 and 5**

- Describe areas of clearing and grubbing identified and defined in the contract plans
- Describe area that will be placed off-limits to the contractor, if applicable (e.g., ESA areas)
- Consider project changes to increase preservation or preserve/avoid critical areas such as floodplains, wetlands, problem soils, and steep slopes.

**5. Describe Proposed Permanent Treatment BMPs to be used on the Project**

*Summarize responses to Checklist T-1, Parts 1-10 in a short narrative. Use the bullets listed below as examples of information that should be described in the narrative. Note, not all of the information listed is required or available at each phase of a project. Information to be included will depend on the nature of the project and the site conditions.*

*Develop an estimate of quantities and costs for the proposed Treatment BMPs as part of the Storm Water BMP Cost Summary; include additional right of way costs if needed for these BMPs. Complete for each phase of the project.*

***This section of the SWDR should be used to develop the Technical Report required by the SWMP for projects that must consider Treatment BMPs, but are not able to incorporate them due to siting constraints.***

**Treatment BMP Strategy, Checklist T-1**

- List the Targeted Design Constituent(s), if any.
- List what percentage of the WQV/WQF will be treated. If less than 100%, describe justification.
- Describe the Treatment BMP strategy for the watershed(s) within the project limits.

**Biofiltration Swales/Strips, Checklist T-1, Parts 1 and 2**

- Are Biofiltration Swales/Strips incorporated into project? If not, explain reason why not feasible. If yes, list number of biofiltration swales and strips, location(s), approximate total area, and total WQF treated.
- Tributary Area
- Calculate Design Storm Flow and calculate Water Quality Flow
- Depth of flow and velocities at Design Storm and at Water Quality Flow

**Dry Weather Diversion, Checklist T-1, Parts 1 and 3**

- Are Dry Weather Diversions incorporated into project? If not, explain reason why not feasible. If yes, list number of Dry Weather Diversions, location(s), and total flow rate diverted.
- Describe persistent dry weather flows
- Proximity to sanitary sewer
- Publicly Owned Treatment Works (POTW) and local health agencies acceptance
- Need for existing sanitary sewer pipeline upgrade

**Infiltration Devices – Checklist T-1, Parts 1 and 4**

- Are Infiltration Basins incorporated into project? If not, explain reason why not feasible (e.g. threat to local groundwater quality, etc.). If yes, list number of Infiltration Devices, location(s), and total WQV treated.
- Approximate tributary area of impervious surface per infiltration basin
- Water Quality Volume (WQV) treated per treatment infiltration basin
- Soil permeability
- Groundwater depth
- Infiltration rate

**Detention Devices, Checklist T-1, Parts 1 and 5**

- Are Detention Basins incorporated into project? If not, explain reason why not feasible. If yes, list number of Detention Devices, location(s), and total WQV treated.
- Approximate tributary area of impervious surface per treatment detention basin
- WQV treated per treatment detention basin.
- Geotechnical Integrity
- Groundwater depth
- Hydraulic head sufficiency

**Gross Solids Removal Devices (GSRDs), Checklist T-1, Parts 1 and 6**

- Are GSRDs incorporated into project? If not, explain reason why not feasible or required. If yes, list number of GSRDs, location(s), and total WQV treated.
- Receiving water on a 303(d) list for trash or Total Maximum Daily Loads (TMDLs) for trash has been established
- Tributary Area
- Estimated volume of device
- Peak design flow

**Traction Sand Traps, Checklist T-1, Parts 1 and 7**

- Are Traction Sand Traps incorporated into project? If not, explain reason why not feasible or required. If yes, list number of Traction Sand Traps, location(s), and total WQV treated.
- Traction Sand or abrasives applied to roadway more than twice per year
- Estimated volume of traction sand applied (S) (m<sup>3</sup>/yr)
- Estimated impact from highway sweeping, snow-blowing operations, or accumulation from other sources
- Sand trap cleaning frequency and Maintenance operational needs such as pullouts

## Media Filters, Checklist T-1, Parts 1 and 8

- Are Media Filters incorporated into project? If not, explain reason why not feasible. If yes, list number of Media Filters, location(s), and total WQV treated.
- Approximate tributary area of impervious surface per media filter
- Water Quality Volume (WQV) treated per media filter
- Local vector agency issues

## Multi-Chambered Treatment Trains (MCTTs), Checklist T-1, Parts 1 and 9

- Are MCTTs incorporated into project? If not, explain reason why not feasible. If yes, list number of MCTTs, location(s), and total WQV treated.
- Approximate tributary area of impervious surface per MCTT
- Water Quality Volume (WQV) treated per MCTT
- Local vector agency issues

## Wet Basins, Checklist T-1, Parts 1 and 10

- Are Wet Basins incorporated into project? If not, explain reason why not feasible. If yes, list number of Wet Basins, location(s), and total WQV treated.
- Approximate tributary area of impervious surface per wet basin
- Water Quality Volume (WQV) treated per wet basin
- Soil permeability
- Groundwater depth

## **6. Describe Proposed Temporary Construction Site BMPs to be used on Project**

*Summarize the selected Construction Site BMPs in a Short Narrative. The narrative should also include any pertinent details from the strategy used for the implementation of Construction Site BMPs (e.g. specific project conditions, construction operations, etc.). It is understood that the level of detail discussed will be different at each phase of the project. Include a brief summary to how the BMPs were estimated.*

- Identify those Construction Site BMPs that have been designated as separate Bid Line Items.
- Identify those Construction Site BMPs incorporated as a lump sum.
- Identify if dewatering will be required during the construction of the project. Describe circumstances. (i.e. will a separate dewatering permit be needed?)
- Document the coordination effort to get concurrence with Construction regarding the Construction Site BMP strategy and associated quantities (provide names of staff and date of meeting(s)). Attach a copy of the Construction Site BMP Consideration Form to the SWDR at PS&E.
- Develop an estimate of quantities and costs for Construction Site BMPs as a part of the Storm Water BMP Cost Summary. Complete for each phase of the project.

## **7. Maintenance BMPs (Drain Inlet Stenciling)**

Briefly describe locations where drain inlet stenciling is required, such as within cities, towns, and communities with populations of 10,000 or more, or within designated MS4 areas. Include any specific stencil types and names of contacts that recommended stencil types or locations.



**REQUIRED ATTACHMENTS**

- ⇒ Vicinity Map
- ⇒ Evaluation Documentation Form (EDF)
- ⇒ Construction Site BMP Consideration Form (required at PS&E only)
- ⇒ Treatment BMP Summary Spreadsheets (required, if Treatment BMPs are incorporated into project)
- ⇒ Quantities for Construction Site BMPs (required at PS&E only)

**SUPPLEMENTAL ATTACHMENTS**

*Note: Supplement Attachments are to be supplied during the SWDR approval process; where noted, some of these items may only be required on a project-specific basis.*

- ⇒ Storm Water BMP Cost Summary
- ⇒ BMP cost information from: Preliminary Project Cost Estimate (PPCE) during PID and PA/ED project phases; Engineer's Cost Estimate for PS&E project phase
- ⇒ Plans showing BMP Deployment (i.e. Layout Sheets, Water Pollution Control Sheets, etc)
- ⇒ Pertinent Correspondence with RWQCB (if requested or recommended by District/Regional SW Coordinator or Designated Reviewer)
- ⇒ Checklist SW-1, Site Data Sources
- ⇒ Checklist SW-2, Storm Water Quality Issues Summary
- ⇒ Checklist SW-3, Measures for Avoiding or Reducing Potential Storm Water BMPs
- ⇒ Checklists DPP-1, Parts 1–5 (Design Pollution Prevention BMPs) [only those parts that were applicable]
- ⇒ Checklists T-1, Parts 1–10 (Treatment BMPs) [only those Parts that were applicable]
- ⇒ Checklists CS-1, Parts 1–6 (Construction Site BMPs) [only those Parts that were applicable]
- ⇒ Calculations and cross sections related to BMPs (if requested by District/Regional Storm Water Coordinator)
- ⇒ 07-340 or 07-345 – including the schedule of values (if requested or recommended by District/Regional SW Coordinator)
- ⇒ Conceptual Drainage Map or Drainage Plans, if available (if requested by Storm Water Coordinator for review)

# APPENDIX E

## Evaluation Documentation Form

See Figure 4-1, Project Evaluation Process for Consideration of Permanent Treatment BMPs

DATE: \_\_\_\_\_  
EA: \_\_\_\_\_

NO.	CRITERIA	YES ✓	NO ✓	SUPPLEMENTAL INFORMATION FOR EXEMPTION
1.	Begin Project Evaluation regarding requirement for consideration of Treatment BMPs	✓		Go to 2
2.	Is this an emergency or Safety project?			If <b>Yes</b> , go to 12. (Safety Projects must be funded from the 010 SHOPP Program). If <b>No</b> , continue to 3.
3.	Have TMDLs been established for surface waters within the project limits?			If <b>Yes</b> , contact the District/Regional NPDES coordinator to discuss the Department's participation in the TMDL (if Applicable), go to 11 or 4 (as determined by the NPDES Coordinator). _____ (Dist./Reg. SW Coordinator initials) If <b>No</b> , continue to 4.
4.	Is the project within an urban MS4?			If <b>Yes</b> , continue to 5. <u>(write the MS4 Area here)</u> If <b>No</b> , go to 12.
5.	Is the project directly or indirectly discharging to surface waters?			If <b>Yes</b> , continue to 6. If <b>No</b> , go to 12.
6.	Is it a new facility or major reconstruction?			If <b>Yes</b> , continue to 8. If <b>No</b> , go to 7.
7.	Will there be a change in line/grade or hydraulic capacity?			If <b>Yes</b> , continue to 8. If <b>No</b> , go to 10.
8.	Is the Disturbed Soil Area (DSA) created by the project <u>greater than or equal to 1.2 hectares</u> ?			If <b>Yes</b> , continue to 11. If <b>No</b> , go to 9. _____ (Total DSA quantity)
9.	Is the project part of a Common Plan of Development?			If <b>Yes</b> , continue to 11. If <b>No</b> , go to 10.
10.	Are there any Pollution Control Requirements within the project limits? <i>(Contact your Dist./Reg. SW Coordinator)</i>			If <b>Yes</b> , continue to 11.  If <b>No</b> , go to 12.
11.	Consider approved Treatment BMPs for the project.			See Sections 2.4 and either Section 5.5 or 6.5 for BMP Evaluation and Selection Process. Complete Checklist T-1 in this Appendix E.
12.	Project is not required to consider Treatment BMPs. _____ _____ _____			Document for Project Files by completing this form, and attaching it to the SWDR.
13.	End of checklist	✓		



# APPENDIX E

## Construction Site BMP Consideration Form

Project Evaluation Process for the Consideration of Construction Site BMPs

DATE: \_\_\_\_\_

EA: \_\_\_\_\_

NO.	CRITERIA	YES ✓	NO ✓	SUPPLEMENTAL INFORMATION
1.	Will construction of the project result in areas of disturbed soil as defined by the Project Planning and Design Guide (PPDG)?			If <b>Yes</b> , Construction Site BMPs for Soil Stabilization (SS) will be required. Complete CS-1, Part 1. Continue to 2. If <b>No</b> , Continue to 3.
2.	Is there a potential for disturbed soil areas within the project to discharge to storm drain inlets, drainage ditches, areas outside the right of way, etc?			If <b>Yes</b> , Construction Site BMPs for Sediment Control (SC) will be required. Complete CS-1, Part 2.  Continue to 3.
3.	Is there a potential for sediment or construction related materials and wastes to be tracked offsite and deposited on private or public paved roads by construction vehicles and equipment?			If <b>Yes</b> , Construction Site BMPs for Tracking Control (TC) will be required. Complete CS-1, Part 3.  Continue to 4.
4.	Is there a potential for wind to transport soil and dust offsite during the period of construction?			If <b>Yes</b> , Construction Site BMPs for Wind Erosion Control (WE) will be required. Complete CS-1, Part 4. Continue to 5.
5.	Is dewatering anticipated or will construction activities occur within or adjacent to a live channel or stream?			If <b>Yes</b> , Construction Site BMPs for Non-Storm Water Management (NS) will be required. Complete CS-1, Part 5.  Continue to 6.
6.	Will construction include saw-cutting, grinding, drilling, concrete or mortar mixing, hydro-demolition, blasting, sandblasting, painting, paving, or other activities that produce residues?			If <b>Yes</b> , Construction Site BMPs for Non-Storm Water Management (NS) will be required. Complete CS-1, Part 5.  Continue to 7.
7.	Are stockpiles of soil, construction related materials, and/or wastes anticipated?			If <b>Yes</b> , Construction Site BMPs for Waste Management and Materials Pollution Control (WM) will be required. Complete CS-1, Part 6. Continue to 8.
8.	Is there a potential for construction related materials and wastes to have direct contact with precipitation; storm water run-on, or stormwater runoff; be dispersed by wind; be dumped and/or spilled into storm drain systems?			If <b>Yes</b> , Construction Site BMPs for Waste Management and Materials Pollution Control (WM) will be required. Complete CS-1, Part 6. Continue to 9.
9.	End of checklist.			Document for Project Files by completing this form, and attaching it to the SWDR.

PE to initialize after concurrence with Construction (PS&E only)

Date



### Checklist SW-1, Site Data Sources

Prepared by: \_\_\_\_\_ Date: \_\_\_\_\_ District-Co-Route: \_\_\_\_\_  
 KP (PM): \_\_\_\_\_ EA: \_\_\_\_\_  
 RWQCB: \_\_\_\_\_

Information for the following data categories should be obtained, reviewed and referenced as necessary throughout the project planning phase. Collect any available documents pertaining to the category and list them and reference your data source. For specific examples of documents within these categories, refer to Section 5.5 of this document. Example categories have been listed below; add additional categories, as needed. Summarize pertinent information in Section 2 of the SWDR.

DATA CATEGORY/SOURCES	Date
<b>Topographic</b>	
•	
•	
•	
<b>Hydraulic</b>	
•	
•	
•	
<b>Soils</b>	
•	
•	
•	
<b>Climatic</b>	
•	
•	
•	
<b>Water Quality</b>	
•	
•	
•	
<b>Other Data Categories</b>	
•	
•	
•	
•	
•	
•	
•	

### Checklist SW-2, Storm Water Quality Issues Summary

Prepared by: \_\_\_\_\_ Date: \_\_\_\_\_ District-Co-Route: \_\_\_\_\_  
 KP (PM): \_\_\_\_\_ EA: \_\_\_\_\_  
 RWQCB: \_\_\_\_\_

The following questions provide a guide to collecting critical information relevant to project storm water quality issues. Complete responses to applicable questions, consulting other Caltrans functional units (Environmental, Landscape Architecture, Maintenance, etc.) and the District/Regional NPDES Coordinator as necessary. Summarize pertinent responses in Section 2 of the SWDR.

- |  |                                   |                             |
|--|-----------------------------------|-----------------------------|
| 1. Determine the receiving waters that may be affected by the project throughout the project life cycle (i.e., construction, maintenance and operation).   | <input type="checkbox"/> Complete | <input type="checkbox"/> NA |
| 2. For the project limits, list the 303(d) impaired receiving water bodies and their constituents of concern.  | <input type="checkbox"/> Complete | <input type="checkbox"/> NA |
| 3. Determine if there are any High Risk Areas (municipal or domestic water supply reservoirs or groundwater percolation facilities) within the project limits. Consider appropriate spill contamination and spill prevention control measures for these new areas. | <input type="checkbox"/> Complete | <input type="checkbox"/> NA |
| 4. Determine the RWQCB special requirements, including TMDLs, effluent limits, etc.  | <input type="checkbox"/> Complete | <input type="checkbox"/> NA |
| 5. Determine regulatory agencies seasonal construction and construction exclusion dates or restrictions required by federal, state, or local agencies.   | <input type="checkbox"/> Complete | <input type="checkbox"/> NA |
| 6. Determine if a 401 certification will be required.  | <input type="checkbox"/> Complete | <input type="checkbox"/> NA |
| 7. List rainy season dates.  | <input type="checkbox"/> Complete | <input type="checkbox"/> NA |
| 8. Determine the general climate of the project area. Identify annual rainfall and rainfall intensity curves.  | <input type="checkbox"/> Complete | <input type="checkbox"/> NA |
| 9. If considering Treatment BMPs, determine the soil classification, permeability, erodibility, and depth to groundwater.  | <input type="checkbox"/> Complete | <input type="checkbox"/> NA |
| 10. Determine contaminated or hazardous soils within the project area.   | <input type="checkbox"/> Complete | <input type="checkbox"/> NA |
| 11. Determine the total disturbed soil area of the project.  | <input type="checkbox"/> Complete | <input type="checkbox"/> NA |
| 12. Describe the topography of the project site.   | <input type="checkbox"/> Complete | <input type="checkbox"/> NA |
| 13. List any areas outside of the Caltrans right-of-way that will be included in the project (e.g. contractor's staging yard, work from barges, easements for staging, etc.).  | <input type="checkbox"/> Complete | <input type="checkbox"/> NA |
| 14. Determine if additional right-of-way acquisition or easements and right-of-entry will be required for design, construction and maintenance of BMPs. If so, how much?   | <input type="checkbox"/> Complete | <input type="checkbox"/> NA |
| 15. Determine if a right-of-way certification is required.   | <input type="checkbox"/> Complete | <input type="checkbox"/> NA |
| 16. Determine the estimated unit costs for right-of-way should it be needed for Treatment BMPs, stabilized conveyance systems, lay-back slopes, or interception ditches.   | <input type="checkbox"/> Complete | <input type="checkbox"/> NA |
| 17. Determine if project area has any slope stabilization concerns.  | <input type="checkbox"/> Complete | <input type="checkbox"/> NA |
| 18. Describe the local land use within the project area and adjacent areas.  | <input type="checkbox"/> Complete | <input type="checkbox"/> NA |
| 19. Evaluate the presence of dry weather flow.   | <input type="checkbox"/> Complete | <input type="checkbox"/> NA |



## Checklist SW-3, Measures for Avoiding or Reducing Potential Storm Water Impacts

Prepared by: \_\_\_\_\_ Date: \_\_\_\_\_ District-Co-Route: \_\_\_\_\_  
 KP (PM): \_\_\_\_\_ EA: \_\_\_\_\_  
 RWQCB: \_\_\_\_\_

The PE must confer with other functional units, such as Landscape Architecture, Hydraulics, Environmental, Materials, Construction and Maintenance, as needed to assess these issues. Summarize pertinent responses in Section 2 of the SWDR.

Options for avoiding or reducing potential impacts during project planning include the following:

1. Can the project be relocated or realigned to avoid/reduce impacts to receiving waters or to increase the preservation of critical (or problematic) areas such as floodplains, steep slopes, wetlands, and areas with erosive or unstable soil conditions? ☐ Yes ☐ No ☐ NA
2. Can structures and bridges be designed or located to reduce work in live streams and minimize construction impacts? ☐ Yes ☐ No ☐ NA
3. Can any of the following methods be utilized to minimize erosion from slopes:
  - a. Disturbing existing slopes only when necessary? ☐ Yes ☐ No ☐ NA
  - b. Minimizing cut and fill areas to reduce slope lengths? ☐ Yes ☐ No ☐ NA
  - c. Incorporating retaining walls to reduce steepness of slopes or to shorten slopes? ☐ Yes ☐ No ☐ NA
  - d. Acquiring right-of-way easements (such as grading easements) to reduce steepness of slopes? ☐ Yes ☐ No ☐ NA
  - e. Avoiding soils or formations that will be particularly difficult to re-stabilize? ☐ Yes ☐ No ☐ NA
  - f. Providing cut and fill slopes flat enough to allow re-vegetation and limit erosion to pre-construction rates? ☐ Yes ☐ No ☐ NA
  - g. Providing benches or terraces on high cut and fill slopes to reduce concentration of flows? ☐ Yes ☐ No ☐ NA
  - h. Rounding and shaping slopes to reduce concentrated flow? ☐ Yes ☐ No ☐ NA
  - i. Collecting concentrated flows in stabilized drains and channels? ☐ Yes ☐ No ☐ NA
4. Does the project design allow for the ease of maintaining all BMPs? ☐ Yes ☐ No
5. Can the project be scheduled or phased to minimize soil-disturbing work during the rainy season? ☐ Yes ☐ No
6. Can permanent storm water pollution controls such as paved slopes, vegetated slopes, basins, and conveyance systems be installed early in the construction process to provide additional protection and to possibly utilize them in addressing construction storm water impacts? ☐ Yes ☐ No ☐ NA



## Design Pollution Prevention BMPs

### Checklist DPP-1, Part 1

Prepared by: \_\_\_\_\_ Date: \_\_\_\_\_ District-Co-Route: \_\_\_\_\_  
 KP (PM): \_\_\_\_\_ EA: \_\_\_\_\_  
 RWQCB: \_\_\_\_\_

#### Consideration of Design Pollution Prevention BMPs

##### 1. Consideration of Downstream Effects Related to Potentially Increased Flow [to streams or channels]?

- |   |                              |                             |                             |
|---|------------------------------|-----------------------------|-----------------------------|
| (a) Will project increase velocity or volume of downstream flow?  | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| (b) Will the project discharge to unlined channels?   | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| (c) Will project increase potential sediment load of downstream flow?   | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| (d) Will project encroach, cross, realign, or cause other hydraulic changes to a stream that may affect downstream channel stability? | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |

If Yes was answered to any of the above questions, consider **Downstream Effects Related to Potentially Increased Flow**, complete the DPP-1, Part 2 checklist.

##### 2. Slope/Surface Protection Systems

- |   |                              |                             |                             |
|---|------------------------------|-----------------------------|-----------------------------|
| (a) Will project create new slopes or modify existing slopes? | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
|---|------------------------------|-----------------------------|-----------------------------|

If Yes was answered to the above question, consider **Slope/Surface Protection Systems**, complete the DPP-1, Part 3 checklist.

##### 3. Concentrated Flow Conveyance Systems

- |   |                              |                             |                             |
|---|------------------------------|-----------------------------|-----------------------------|
| (a) Will the project create or modify ditches, dikes, berms, or swales? | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| (b) Will project create new slopes or modify existing slopes?           | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| (c) Will it be necessary to direct or intercept surface runoff?         | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| (d) Will cross drains be modified?                                      | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |

If Yes was answered to any of the above questions, consider **Concentrated Flow Conveyance Systems**; complete the DPP-1, Part 4 checklist.

##### 4. Preservation of Existing Vegetation

- |  |                                   |
|--|-----------------------------------|
| a) It is the goal of the Storm Water Program to maximize the protection of desirable existing vegetation to provide erosion and sediment control benefits on all projects. | <input type="checkbox"/> Complete |
|--|-----------------------------------|

Consider **Preservation of Existing Vegetation**, complete the DPP-1, Part 5 checklist.

**Design Pollution Prevention BMPs****Checklist DPP-1, Part 2**

Prepared by: \_\_\_\_\_ Date: \_\_\_\_\_ District-Co-Route: \_\_\_\_\_  
KP (PM): \_\_\_\_\_ EA: \_\_\_\_\_  
RWQCB: \_\_\_\_\_

**Downstream Effects Related to Potentially Increased Flow**

1. Review total paved area and reduce to the maximum extent possible. ☐ Complete
2. Review channel lining materials and design for stream bank erosion control. ☐ Completed
  - (a) See Chapters 860 and 870 of the HDM. ☐ Completed
  - (b) Consider channel erosion control measures within the project limits as well as downstream. Consider scour velocity. ☐ Completed
3. Include, where appropriate, energy dissipation devices at culvert outlets. ☐ Completed
4. Ensure all transitions between culvert outlets/headwalls/wingwalls and channels are smooth to reduce turbulence and scour. ☐ Completed
5. Include, if appropriate, detention facilities to reduce peak discharges. ☐ Completed



## Design Pollution Prevention BMPs

### Checklist DPP-1, Part 3

Prepared by: \_\_\_\_\_ Date: \_\_\_\_\_ District-Co-Route: \_\_\_\_\_  
 KP (PM): \_\_\_\_\_ EA: \_\_\_\_\_  
 RWQCB: \_\_\_\_\_

## Slope / Surface Protection Systems

1. What are the proposed areas of cut and fill? (attach plan or map) ☐ Complete
2. Were benches or terraces provided on high cut and fill slopes to reduce concentration of flows? ☐ Yes ☐ No
3. Were slopes rounded and/or shaped to reduce concentrated flow? ☐ Yes ☐ No
4. Were concentrated flows collected in stabilized drains or channels? ☐ Yes ☐ No
5. Are slopes > 1:4 vertical:horizontal (V:H)? ☐ Yes ☐ No  
 If Yes, an erosion control plan must be prepared or approved by the District Landscape Architect.
6. Are slopes > 1:2 (V:H)? ☐ Yes ☐ No  
 If Yes, Geotechnical Services must prepare a Geotechnical Design Report, and the District Landscape Architect should prepare or approve an erosion control plan. Concurrence must be obtained from the District Maintenance Storm Water Coordinator for slopes steeper than 1:2 (V:H).
7. Estimate the change to the impervious areas that will result from this project. \_\_\_\_\_ ha (ac) ☐ Complete

### VEGETATED SURFACES

1. Identify existing vegetation. ☐ Complete
2. Evaluate site to determine soil types, appropriate vegetation and planting strategies. ☐ Complete
3. How long will it take for permanent vegetation to establish? ☐ Complete
4. Minimize overland and concentrated flow depths and velocities. ☐ Complete

### HARD SURFACES

1. Are hard surfaces required? ☐ Yes ☐ No  
 If Yes, document purpose (safety, maintenance, soil stabilization, etc.), types, and general locations of the installations. ☐ Complete

Review appropriate SSPs for Vegetated Surface and Hard Surface Protection Systems. ☐ Complete



### Design Pollution Prevention BMPs

#### Checklist DPP-1, Part 4

Prepared by: \_\_\_\_\_ Date: \_\_\_\_\_ District-Co-Route: \_\_\_\_\_  
 KP (PM): \_\_\_\_\_ EA: \_\_\_\_\_  
 RWQCB: \_\_\_\_\_

#### Concentrated Flow Conveyance Systems

##### Ditches, Berms, Dikes and Swales

1. Consider Ditches, Berms, Dikes, and Swales as per Chapters 813, 836, and 860 of the HDM. ☐ Complete
2. Evaluate risks due to erosion, overtopping, flow backups or washout. ☐ Complete
3. Consider outlet protection where localized scour is anticipated. ☐ Complete
4. Examine the site for run-on from off-site sources. ☐ Complete
5. Consider channel lining when velocities exceed scour velocity for soil. ☐ Complete

##### Overside Drains

1. Consider downdrains, as per Index 834.4 of the HDM. ☐ Complete
2. Consider paved spillways for side slopes flatter than 1:4 V:H. ☐ Complete

##### Flared Culvert End Sections

1. Consider flared end sections on culvert inlets and outlets as per Chapter 827 of the HDM. ☐ Complete

##### Outlet Protection/Velocity Dissipation Devices

1. Consider outlet protection/velocity dissipation devices at outlets, including cross drains, as per Chapters 827 and 870 of the HDM. ☐ Complete

Review appropriate SSPs for Concentrated Flow Conveyance Systems. ☐ Complete

**Design Pollution Prevention BMPs****Checklist DPP-1, Part 5**

Prepared by: \_\_\_\_\_ Date: \_\_\_\_\_ District-Co-Route: \_\_\_\_\_  
KP (PM): \_\_\_\_\_ EA: \_\_\_\_\_  
RWQCB: \_\_\_\_\_

**Preservation of Existing Vegetation**

1. Review Preservation of Property, Standard Specifications 16.1.01 and 16-1.02 (Clearing and Grubbing) to reduce clearing and grubbing and maximize preservation of existing vegetation. ☐ Complete
2. Has all vegetation to be retained been coordinated with Environmental, and identified and defined in the contract plans? ☐ Yes ☐ No
3. Have steps been taken to minimize disturbed areas, such as locating temporary roadways to avoid stands of trees and shrubs and to follow existing contours to reduce cutting and filling? ☐ Complete
4. Have impacts to preserved vegetation been considered while work is occurring in disturbed areas? ☐ Yes ☐ No
5. Are all areas to be preserved delineated on the plans? ☐ Yes ☐ No



## Treatment BMPs

### Checklist T-1, Part 1

Prepared by: \_\_\_\_\_ Date: \_\_\_\_\_ District-Co-Route: \_\_\_\_\_  
 KP (PM): \_\_\_\_\_ EA: \_\_\_\_\_  
 RWQCB: \_\_\_\_\_

#### Consideration of Treatment BMPs

This checklist is used for projects that require the consideration of Approved Treatment BMPs, as determined from the process described in Section 4 (Project Treatment Consideration) and the Evaluation Documentation Form (EDF). This checklist will be used to determine which Treatment BMPs should be considered for each watershed and sub-watersheds within the project. Supplemental data will be needed to verify siting and design applicability for final incorporation into a project.

**Complete this checklist for each phase of the project, when considering Treatment BMPs. Use the responses to the questions as the basis when developing the narrative in Section 5 of the Storm Water Data Report to document that Treatment BMPs have been appropriately considered.**

**Answer all questions, unless otherwise directed.**

**1. Dry Weather Flow Diversion**

- (a) Are dry weather flows generated by Caltrans anticipated to be persistent? ☐ Yes ☐ No
- (b) Is a sanitary sewer located on or near the site? ☐ Yes ☐ No
- (c) Is the domestic wastewater treatment authority willing to accept flow? ☐ Yes ☐ No

If Yes was answered to all of these questions consider Dry Weather Flow Diversion, complete and attach Part 3 of this checklist

**2. Is the receiving water on the 303(d) list for litter/trash or has a TMDL been issued for litter/trash?** ☐ Yes ☐ No

If Yes, consider Gross Solids Removal Devices (GSRDs), complete and attach Part 6 of this checklist. Note: Biofiltration Systems, Infiltration Basins, Detention Devices, Media Filters, MCTTs, and Wet Basins also can capture litter – consult with District/Regional NPDES if these devices should be considered to meet litter/trash TMDL.

**3. Is project located in an area (e.g., mountain regions) where traction sand is applied more than twice a year?** ☐ Yes ☐ No

If Yes, consider **Traction Sand Traps**, complete and attach **Part 7** of this checklist.

**4. (a) Are there local influent limits for infiltration or Basin Plan restrictions or other local agency prohibitions that would restrict the use of the infiltration devices?** ☐ Yes ☐ No

(b) Would infiltration pose a threat to local groundwater quality as determined by the District/Regional NPDES Storm Water Coordinator? ☐ Yes ☐ No



If the answer to either part of Question 4 is Yes, then Infiltration Devices are infeasible and the consideration of Infiltration Devices should not be made when completing Questions 5 through 17.

5. (a) Does the project discharge to any 303(d) listed water body? ☐ Yes ☐ No  
If No, go to Question 17, General Purpose Pollutant Removal
- (b) If Yes, is the identified pollutant(s) considered a Targeted Design Constituent (TDC) (check all that apply):  
 \_\_\_ phosphorus, \_\_\_ nitrogen, \_\_\_ total copper, \_\_\_ dissolved copper,  
 \_\_\_ total lead, \_\_\_ dissolved lead, \_\_\_ total zinc, \_\_\_ dissolved zinc,  
 \_\_\_ sediments, \_\_\_ general metals [unspecified metals].
- (c) If only one TDC is checked above, continue to Question 6. ☐ Complete
- (d) If more than one TDC is checked, contact your District/Regional NPDES Coordinator to determine priority before continuing with this checklist. ☐ Complete
6. Consult with the District/Regional Storm Water Coordinator to determine whether Treatment BMP selection will be affected by any existing or future TMDL requirements. ☐ Complete

The following questions show the approved Treatment BMPs in order of preference based on load reduction (performance) for the listed constituent and lifetime costs for the device, excluding right of way. Note that a line separates Treatment BMPs into groups of approximately equal effectiveness and within each grouping, any of the Treatment BMPs may be selected for placement if meeting site conditions. In the space provided next to the BMP, use Yes or a check mark to indicate a positive response.

**For the SWDRs developed for the PID and PA/ED phases of a project: Consider all approved Treatment BMPs listed that can be reasonably incorporated into the project for each TDC.**

**For the SWDR developed for the PS&E phase: Indicate (Yes or check mark) only those BMPs that will be incorporated into the project.**

7. Is phosphorus the TDC? [Use this constituent if “eutrophic” or “nutrients” is the TDC for the water body.] If Yes, consider: ☐ Yes ☐ No  
 \_\_\_ Infiltration Devices  
 \_\_\_ Austin Sand Filters
8. Is nitrogen the TDC? If Yes, consider: ☐ Yes ☐ No  
 \_\_\_ Infiltration Devices  
 \_\_\_ Austin Sand Filter  
 \_\_\_ Delaware Filter  
 \_\_\_ Detention Device  
 \_\_\_ MCTT

9. Is copper (total) the TDC? If Yes for total Copper, consider: ☐ Yes ☐ No
- ☐ Infiltration Devices
  - ☐ Wet Basins
  - ☐ Biofiltration Strips
  - ☐ Detention Devices
  - ☐ Biofiltration Swales
  - ☐ Austin Sand Filter
  - ☐ Delaware Filter
  - ☐ MCTT
10. Is copper (dissolved) the TDC? If Yes for dissolved Copper, consider: ☐ Yes ☐ No
- ☐ Infiltration Devices
  - ☐ Biofiltration Strips
  - ☐ Wet Basin
  - ☐ Biofiltration Swale
11. Is lead (total) the TDC? If Yes for total Lead, consider: ☐ Yes ☐ No
- ☐ Infiltration Devices
  - ☐ Wet Basin
  - ☐ Biofiltration Strips
  - ☐ Austin Sand Filter
  - ☐ Delaware Filter
  - ☐ Detention Devices
  - ☐ Biofiltration Swales
  - ☐ MCTT
12. Is lead (dissolved) the TDC? If Yes for dissolved Lead, consider: ☐ Yes ☐ No
- ☐ Infiltration Devices
  - ☐ Biofiltration Strips
  - ☐ Wet Basin
  - ☐ Detention Device
  - ☐ Biofiltration Swales
  - ☐ Austin Sand Filters
13. Is zinc (total) the TDC? If Yes for total Zinc, consider: ☐ Yes ☐ No
- ☐ Infiltration Devices
  - ☐ Delaware Filter
  - ☐ Wet Basin
  - ☐ Biofiltration Strips
  - ☐ Biofiltration Swales
  - ☐ Austin Sand Filter
  - ☐ MCTT
  - ☐ Detention Devices
14. Is zinc (dissolved) the TDC? If Yes for dissolved Zinc, consider: ☐ Yes ☐ No
- ☐ Infiltration Devices
  - ☐ Delaware Filter
  - ☐ Biofiltration Strip
  - ☐ Biofiltration Swale
  - ☐ Austin Sand Filter
  - ☐ MCTT

15. Is sediment (total suspended solids [TSS]) the TDC? If Yes for TSS, consider: ☐ Yes ☐ No

- ☐ Infiltration Devices
- ☐ Austin Sand Filter
- ☐ Delaware Filter
- ☐ Wet Basin
- ☐ Detention Device
- ☐ Biofiltration Strip
- ☐ MCTT
- ☐ Biofiltration Swale

16. Are "General Metals" or (unspecified) "Metals" the TDC? If Yes for General Metals, consider: ☐ Yes ☐ No

- ☐ Infiltration Devices
- ☐ Biofiltration Strips
- ☐ Wet Basin
- ☐ Biofiltration Swale
- ☐ Austin Sand Filter
- ☐ Delaware Filter
- ☐ MCTT

17. General Purpose Pollutant Removal.: When it is determined that there are no TDCs, consider the Treatment BMPs in the order listed below. ☐ Yes ☐ No

- ☐ Infiltration Devices
- ☐ Biofiltration Strips
- ☐ Wet Basin
- ☐ Biofiltration Swale
- ☐ Austin Sand Filter
- ☐ Detention Device
- ☐ Delaware Filter
- ☐ MCTT

18. Biofiltration

(a) Are site conditions and climate favorable to allow suitable vegetation to be established? ☐ Yes ☐ No

(b) Have Biofiltration strips and swales been considered to the extent practicable? Note: Biofiltration BMPs should be considered for all projects, even if other Treatment BMPs are placed. ☐ Yes ☐ No

If No to (a) or (b), document justification in Section 5 of the SWDR.

19. After completing the above, complete and attach the checklists shown below for every Treatment BMP under consideration ☐ Complete

- ☐ Biofiltration Strips and Biofiltration Swales: Checklist T-1, Part 2
- ☐ Dry Weather Diversion: Checklist T-1, Part 3
- ☐ Infiltration Devices: Checklist T-1, Part 4
- ☐ Detention Devices: Checklist T-1, Part 5
- ☐ GSRDs: Checklist T-1, Part 6
- ☐ Traction Sand Traps: Checklist T-1, Part 7
- ☐ Media Filter [Austin Sand Filter and Delaware Filter]: Checklist T-1, Part 8
- ☐ Multi-Chambered Treatment Train: Checklist T-1, Part 9
- ☐ Wet Basins: Checklist T-1, Part 10

20. (a) Estimate what percentage of WQV/WQF will be treated by the preferred Treatment BMP(s): \_\_\_\_\_% ☐ Complete
- (b) Have Treatment BMPs been considered for use in parallel or series to increase this percentage? ☐ Yes ☐ No
21. Prepare cost estimate, including right of way, for selected Treatment BMPs and include as supplemental information for SWDR approval. ☐ Complete



<b>Treatment BMPs</b> <b>Checklist T-1, Part 2</b>		
Prepared by: _____	Date: _____	District-Co-Route: _____
KP (PM): _____	EA: _____	
RWQCB: _____		

## Biofiltration Swales / Biofiltration Strips

### Feasibility

1. Do the climate and site conditions allow vegetation to be established? ☐ Yes   ☐ No
  
2. Are flow velocities < 1.2 m/s (4 fps) (i.e. low enough to prevent scour of the vegetated bioswale as per HDM Table 873.3I)? ☐ Yes   ☐ No
  
- If No to either question above, Biofiltration Swales and Biofiltration Strips are not feasible.
  
3. Are Biofiltration Swales proposed at sites where known hazardous soils or contaminated groundwater plumes exist? ☐ Yes   ☐ No  
     If Yes, consult with District/Regional NPDES Coordinator about how to proceed.
  
4. Does adequate area exist within the right-of-way to place biofiltration device(s)? ☐ Yes   ☐ No  
     If Yes, continue to the Design Elements section. If No, continue to Question 5.
  
5. If adequate area does not exist within right-of-way, can suitable, additional right-of-way be acquired to site biofiltration devices and how much right-of way would be needed to treat WQF? \_\_\_\_\_ ha (ac) ☐ Yes   ☐ No  
     If Yes, continue to Design Elements section. If No, continue to Question 6.
  
6. If adequate area cannot be obtained, document in Section 5 of the SWDR that the inability to obtain adequate area prevents the incorporation of these Treatment BMPs into the project. ☐ Complete

### Design Elements

\* **Required** Design Element – A “Yes” response to these questions is required to further the consideration of this BMP into the project design. Document a “No” response in Section 5 of the SWDR to describe why this Treatment BMP cannot be included into the project design.

\*\* **Recommended** Design Element – A “Yes” response is preferred for these questions, but not required for incorporation into a project design.

1. Has the District Landscape Architect provided vegetation mixes appropriate for climate and location? \* ☐ Yes   ☐ No



- |  |                              |                             |
|--|------------------------------|-----------------------------|
| 2. Can the bioswale be designed as a conveyance system under any expected flows > the WQF event, as per HDM Chapter 800? * (e.g. freeboard, minimum slope, etc.) | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| 3. Can the bioswale be designed as a water quality treatment device under the WQF while meeting the required HRT, depth, and velocity criteria? *                | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| 4. Is the maximum length of a biostrip $\leq 91$ m (300 ft)? *   | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| 5. Has the minimum width (in the direction of flow) of the invert of the bioswale received the concurrence of Maintenance? *                                     | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| 6. Can bioswales be located in natural or low cut sections to reduce maintenance problems caused by animals burrowing through the berm of the swale? **          | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| 7. Is the biostrip sized as long as possible in the direction of flow (HRT $\geq 5$ minutes)? **   | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| 8. Has biofiltration been considered for locations upstream of other Treatment BMPs, as part of a treatment train? **  | <input type="checkbox"/> Yes | <input type="checkbox"/> No |

<b>Treatment BMPs</b> <b>Checklist T-1, Part 3</b>		
Prepared by: _____	Date: _____	District-Co-Route: _____
KP (PM): _____	EA: _____	
RWQCB: _____		

## Dry Weather Flow Diversion

### Feasibility

1. Is dry-weather flow diversion acceptable to a Publicly Owned Treatment Works (POTW)? ☐ Yes ☐ No
2. Would a connection require ordinary (i.e., not extraordinary) plumbing to implement? ☐ Yes ☐ No  
 If No to either question above, Dry Weather Flow Diversion is not feasible.
3. Does adequate area exist within the right-of-way to place Dry Weather Flow Diversion devices? ☐ Yes ☐ No  
 If Yes, continue to Design Elements sections. If No, continue to Question 4.
4. If adequate area does not exist within right-of-way, can suitable, additional right-of-way be acquired to site Dry Weather Flow Diversion devices and how much right-of-way would be needed? \_\_\_\_\_ ha (ac) ☐ Yes ☐ No  
 If Yes, continue to the Design Elements section.  
 If No, continue to Question 5.
5. If adequate area cannot be obtained, document in Section 5 of the SWDR that the inability to obtain adequate area prevents the incorporation of this Treatment BMP into the project. ☐ Complete

### Design Elements

\* **Required** Design Element – A “Yes” response to these questions is required to further the consideration of this BMP into the project design. Document a “No” response in Section 5 of the SWDR to describe why this Treatment BMP cannot be included into the project design.

\*\* **Recommended** Design Element – A “Yes” response is preferred for these questions, but not required for incorporation into a project design.

1. Does the existing sanitary sewer pipeline have adequate capacity to accept project dry weather flows, or can an upgrade be implemented to handle the anticipated dry weather flows within the project’s budget and objectives? \* ☐ Yes ☐ No
2. Can the connection be designed to allow for Maintenance vehicle access? \* ☐ Yes ☐ No
3. Can gate, weir, or valve be designed to stop diversion during storm events? \* ☐ Yes ☐ No
4. Can the inlet be designed to reduce chances of clogging the diversion pipe or channel? \* ☐ Yes ☐ No
5. Can a back flow prevention device be designed to prevent sanitary sewage from entering storm drain? \* ☐ Yes ☐ No



<b>Treatment BMPs</b> <b>Checklist T-1, Part 4</b>		
Prepared by: _____	Date: _____	District-Co-Route: _____
KP (PM): _____	EA: _____	
RWQCB: _____		

## Infiltration Devices

### Feasibility

1. Does local Basin Plan or other local ordinance provide influent limits on quality of water that can be infiltrated, and would infiltration pose a threat to groundwater quality as determined by the District/Regional NPDES Storm Water Coordinator? ☐ Yes ☐ No
  2. Does infiltration at the site compromise the integrity of any slopes in the area? ☐ Yes ☐ No
  3. Per survey data or U.S. Geological Survey (USGS) Quad Map, are existing slopes at the proposed device site >15%? ☐ Yes ☐ No
  4. At the invert, does the soil type classify as NRCS Hydrologic Soil Group (HSG) D, or does the soil have an infiltration rate < 1.3 cm/hr (0.5 inches/hr)? ☐ Yes ☐ No
  5. Is site located over a previously identified contaminated groundwater plume? ☐ Yes ☐ No
- If Yes to any question above, Infiltration Devices are not feasible; stop here and consider other approved Treatment BMPs.
6. (a) Does site have groundwater within 3 m (10 ft) of basin invert? ☐ Yes ☐ No
  - (b) Does site investigation indicate that the infiltration rate is significantly greater than 6.4 cm/hr (2.5 inches/hr)? ☐ Yes ☐ No
- If Yes to either part of Question 6, the RWQCB must be consulted, and the RWQCB must conclude that the groundwater quality will not be compromised, before approving the site for infiltration. ☐ Yes ☐ No
7. Does adequate area exist within the right-of-way to place infiltration device(s)? If Yes, continue to Design Elements sections. If No, continue to Question 8. ☐ Yes ☐ No
  8. If adequate area does not exist within right-of-way, can suitable, additional right-of-way be acquired to site infiltration devices and how much right-of way would be needed to treat WQV? \_\_\_\_\_ ha (ac) ☐ Yes ☐ No  

If Yes, continue to Design Elements section.

If No, continue to Question 9.
  9. If adequate area cannot be obtained, document in Section 5 of the SWDR that the inability to obtain adequate area prevents the incorporation of this Treatment BMP into the project. ☐ Complete

## Design Elements – Infiltration Basin

\* **Required** Design Element – A “Yes” response to these questions is required to further the consideration of this BMP into the project design. Document a “No” response in Section 5 of the SWDR to describe why this Treatment BMP cannot be included into the project design.

\*\* **Recommended** Design Element – A “Yes” response is preferred for these questions, but not required for incorporation into a project design.

1. Has a detailed investigation been conducted, including subsurface soil investigation, in-hole conductivity testing and groundwater elevation determination? (This report must be completed for PS&E level design.) \* ☐ Yes ☐ No
2. Has a flood control spillway with scour protection been provided? \* ☐ Yes ☐ No
3. Is the Infiltration Basin size sufficient to capture the WQV while maintaining a 40-48 hour drawdown time? (Note: the WQV must be  $\geq 123\text{m}^3$  [0.1 acre-feet]) \* ☐ Yes ☐ No
4. Can access be placed to the invert of the Infiltration Basin? \* ☐ Yes ☐ No
5. Can the Infiltration Basin be designed with adequate freeboard above the WQV elevation? \* ☐ Yes ☐ No
6. Can the Infiltration Basin be designed with interior side slopes no steeper than 1V:3H (with approval by District Maintenance, with 1:4 preferred)? \* ☐ Yes ☐ No
7. Can vegetation be established in the Infiltration Basin? \*\* ☐ Yes ☐ No
8. Can diversion be designed, constructed, and maintained to bypass flows exceeding the WQV? \*\* ☐ Yes ☐ No
9. Can a gravity-fed Maintenance/Emergency Drain be placed? \*\* ☐ Yes ☐ No

## Design Elements – Infiltration Trench

\* **Required** Design Element – (see definition above)

\*\* **Recommended** Design Element – (see definition above)

1. Has a detailed investigation been conducted, including subsurface soil investigation, in-hole conductivity testing and groundwater elevation determination? (This report must be completed for PS&E level design.) \* ☐ Yes ☐ No
2. Is the surrounding soil within Hydrologic Soil Groups (HSG) Types A or B? \* ☐ Yes ☐ No
3. Is the volume of the Infiltration Trench equal to at least the 3x the WQV, while maintaining a drawdown time of  $\leq 72$  hours? (Note: the WQV must be  $\geq 123\text{m}^3$  [0.1 acre-feet], unless the District/Regional NPDES Coordinator will allow a volume between  $80\text{m}^3$  and  $123\text{m}^3$  to be considered.) \* ☐ Yes ☐ No
4. Is the depth of the Infiltration Trench  $\leq 4\text{m}$ , and is the depth  $<$  the width? \* ☐ Yes ☐ No
5. Can an observation well be placed in the trench? \* ☐ Yes ☐ No
6. Can access be provided to the Infiltration Trench? \* ☐ Yes ☐ No
7. Can pretreatment be provided to capture sediment in the runoff (such as using biofiltration)? \* ☐ Yes ☐ No
8. Can flow diversion be designed, constructed, and maintained to bypass flows exceeding the WQV? \*\* ☐ Yes ☐ No
9. Can a perimeter curb or similar device be provided (to limit wheel loads upon the trench)? \*\* ☐ Yes ☐ No



<b>Treatment BMPs</b> <b>Checklist T-1, Part 5</b>		
Prepared by: _____	Date: _____	District-Co-Route: _____
KP (PM): _____	EA: _____	
RWQCB: _____		

## Detention Devices

### Feasibility

1. Is there sufficient head to prevent objectionable backwater conditions in the upstream drainage systems? ☐ Yes ☐ No

2. 2a) Is the volume of the detention device equal to at least the WQV? (Note: the WQV must be  $\geq 123\text{m}^3$  [0.1 acre-feet]) ☐ Yes ☐ No

Only answer (b) if the detention device is being used also to capture traction sand.

2b) Is the total volume of the detention device at least equal to the WQV and the anticipated volume of traction sand, while maintaining a minimum 300 mm freeboard (1 ft)? ☐ Yes ☐ No

3. Is basin invert  $\geq 3$  m above seasonally high groundwater or can it be designed with an impermeable liner? (Note: If an impermeable liner is used, the seasonally high groundwater elevation must not encroach within 300 mm (12 inches) of the invert.) ☐ Yes ☐ No

If No to any question above, then Detention Devices are not feasible.

4. Does adequate area exist within the right-of-way to place Detention Device(s)? ☐ Yes ☐ No  
 If Yes, continue to the Design Elements section. If No, continue to Question 5.

5. If adequate area does not exist within right-of-way, can suitable, additional right-of-way be acquired to site Detention Device(s) and how much right-of way would be needed to treat WQV? \_\_\_\_\_ ha (ac) ☐ Yes ☐ No  
 If Yes, continue to the Design Elements section. If No, continue to Question 6.

6. If adequate area cannot be obtained, document in Section 5 of the SWDR that the inability to obtain adequate area prevents the incorporation of this Treatment BMP into the project. ☐ Complete

### Design Elements

\* **Required** Design Element – A “Yes” response to these questions is required to further the consideration of this BMP into the project design. Document a “No” response in Section 5 of the SWDR to describe why this Treatment BMP cannot be included into the project design.

\*\* **Recommended** Design Element – A “Yes” response is preferred for these questions, but not required for incorporation into a project design.

1. Has the geotechnical integrity of the site been evaluated to determine potential impacts to surrounding slopes due to incidental infiltration? If incidental infiltration through the invert of an unlined detention device is a concern, consider using an impermeable liner. \* ☐ Yes ☐ No
2. Has the location of the detention device been evaluated for any effects to the adjacent roadway and subgrade? \* ☐ Yes ☐ No
3. Can a minimum freeboard of 300 mm (12 in) be provided above the WQV? \* ☐ Yes ☐ No
4. Is an emergency outlet provided? \* ☐ Yes ☐ No
5. Is the drawdown time of the detention basin within 24 to 72 hours? \* ☐ Yes ☐ No
6. Is the basin outlet designed to minimize clogging (minimum outlet orifice diameter of 13 mm (0.5 inches)? \* ☐ Yes ☐ No
7. Are the inlet and outlet structures designed to prevent scour and re-suspension of settled materials, and to enhance quiescent conditions? \* ☐ Yes ☐ No
8. Can vegetation be established in an earthen basin at the invert and on the side slopes for erosion control and to minimize re-suspension? \* ☐ Yes ☐ No
9. Has sufficient access for Maintenance been provided? \* ☐ Yes ☐ No
10. Is the side slope ratio of earthen berms 1V:3H or flatter? \*\*  
(Note: If No, District Maintenance must approve.) ☐ Yes ☐ No
11. If significant sediment is expected from nearby slopes, can the detention device be designed with additional volume equal to the expected annual loading? \*\* ☐ Yes ☐ No
12. Is flow path as long as possible ( $\geq 2:1$  length to width ratio is recommended)? \*\* ☐ Yes ☐ No

<b>Treatment BMPs</b> <b>Checklist T-1, Part 6</b>		
Prepared by: _____	Date: _____	District-Co-Route: _____
KP (PM): _____	EA: _____	
RWQCB: _____		

## Gross Solids Removal Devices (GSRDs)

### Feasibility

1. Is the receiving water body downstream of the tributary area to the proposed GSRD on a 303(d) list or has a TMDL for litter been established? ☐ Yes ☐ No
2. Are the devices sized for peak HDM design flow or can peak flow be diverted? ☐ Yes ☐ No
3. Are the devices sized to contain gross solids (litter and vegetation) for a period of one year? ☐ Yes ☐ No
4. Is there sufficient access for maintenance and large equipment (vacuum truck)? ☐ Yes ☐ No

If No to any question above, then Gross Solids Removal Devices are not feasible. Note that Biofiltration Systems, Infiltration Devices, Detention Devices, Dry Weather Flow Diversion, MCTT, Media Filters, and Wet Basins may be considered for litter capture, but consult with District/Regional NPDES if proposed to meet a TMDL for litter.

4. Does adequate area exist within the right-of-way to place Gross Solids Removal Devices? ☐ Yes ☐ No  
 If Yes, continue to Design Elements section. If No, continue to Question 5.
5. If adequate area does not exist within right-of-way, can suitable, additional right-of-way be acquired to site Gross Solids Removal Devices and how much right-of-way would be needed? \_\_\_\_\_ ha (ac) ☐ Yes ☐ No  
 If Yes, continue to the Design Elements section. If No, continue to Question 6.
6. If adequate area cannot be obtained, document in Section 5 of the SWDR that the inability to obtain adequate area prevents the incorporation of this Treatment BMP into the project. ☐ Complete



### Design Elements – Linear Radial Device

**\* Required** Design Element – A “Yes” response to these questions is required to further the consideration of this BMP into the project design. Document a “No” response in Section 5 of the SWDR to describe why this Treatment BMP cannot be included into the project design.

**\*\* Recommended** Design Element – A “Yes” response is preferred for these questions, but not required for incorporation into a project design.

1. Does sufficient hydraulic head exist to place the Linear Radial GSRD? \* ☐ Yes ☐ No
2. Was the litter accumulation rate of 0.7m<sup>3</sup>/ha/yr (10 ft<sup>3</sup>/ac/yr) (or a different rate recommended by Maintenance) used to size the device? \* ☐ Yes ☐ No
3. Were the standard detail sheets used for the layout of the devices? \*\*  
If No, consult with Headquarters Office of Storm Water Management and District/Regional NPDES. ☐ Yes ☐ No

### Design Elements – Inclined Screen

**\* Required** Design Element – A “Yes” response to these questions is required to further the consideration of this BMP into the project design. Document a “No” response in Section 5 of the SWDR to describe why this Treatment BMP cannot be included into the project design.

**\*\* Recommended** Design Element – A “Yes” response is preferred for these questions, but not required for incorporation into a project design.

1. Does sufficient hydraulic head exist to place the Inclined Screen GSRD? \* ☐ Yes ☐ No
2. Was the litter accumulation rate of 0.7m<sup>3</sup>/ha/yr (10 ft<sup>3</sup>/ac/yr) (or a different rate recommended by Maintenance) used to size the device? \* ☐ Yes ☐ No
3. Were the standard details sheets used for the layout of the devices? \*\*  
If No, consult with Headquarters Office of Storm Water Management and District NPDES. ☐ Yes ☐ No

<b>Treatment BMPs</b> <b>Checklist T-1, Part 7</b>		
Prepared by: _____	Date: _____	District-Co-Route: _____
KP (PM): _____	EA: _____	
RWQCB: _____		

### Traction Sand Traps

#### Feasibility

1. Can a Detention Device be sized to capture the estimated traction sand and the WQV from the tributary area?  
 If Yes, then a separate Traction Sand Trap may not be necessary. Coordinate with the District/Regional Storm Water Coordinator and also complete Checklist T-1, Part 5.
 
☐ Yes    ☐ No
  
2. Is the Traction Sand Trap proposed for a site where sand or other traction enhancing substances are applied to the roadway at least twice per year?
 
☐ Yes    ☐ No
  
3. Is adequate space provided for Maintenance staff and equipment access for annual cleanout?
 
☐ Yes    ☐ No
  
- If the answer to either Question 2 or 3 is No, then a Traction Sand Trap is not feasible.
 
☐ Yes    ☐ No
  
4. Does adequate area exist within the right-of-way to place Traction Sand Traps?  
 If Yes, continue to Design Elements section. If No, continue to Question 5.
 
☐ Yes    ☐ No
  
5. If adequate area does not exist within right-of-way, can suitable, additional right-of-way be acquired to site Traction Sand Traps and how much right-of way would be needed? \_\_\_\_\_ ha (ac)  
 If Yes, continue to the Design Elements section. If No, continue to Question 6.
 
☐ Yes    ☐ No
  
6. If adequate area cannot be obtained, document in Section 5 of the SWDR that the inability to obtain adequate area prevents the incorporation of this Treatment BMP into the project.
 
☐ Complete

### Design Elements

\* **Required** Design Element – A “Yes” response to these questions is required to further the consideration of this BMP into the project design. Document a “No” response in Section 5 of the SWDR to describe why this Treatment BMP cannot be included into the project design.

\*\* **Recommended** Design Element – A “Yes” response is preferred for these questions, but not required for incorporation into a project design.

1. Was the local Caltrans Maintenance Station contracted to provide the amount of traction sand used annually at the location? \* (Detention Device or CMP type) ☐ Yes ☐ No  
List application rate reported. \_\_\_\_\_
2. Does the traction sand trap have enough volume to store settled sand over the winter using the formula presented in Appendix B, Section B.5? \* (Detention Device or CMP type) ☐ Yes ☐ No
3. Is the invert of the traction sand trap 1 to 2 m (3.3 to 6.6 ft) above seasonally high groundwater? \* (CMP type) ☐ Yes ☐ No
4. Is the maximum depth of the storage within 3 m (10 ft) of the ground surface, or another depth as required by District Maintenance? \* (CMP type) ☐ Yes ☐ No
5. Has the District/Regional NPDES Storm Water Coordinator been contacted to ensure that the traction sand trap is not classified as a regulated underground injection well? \* (CMP type) ☐ Yes ☐ No
6. Can peak flow be diverted around the device? \*\* (CMP type) ☐ Yes ☐ No
7. Within the tributary area, have the unstabilized areas (that would contribute sediment in addition to traction sand) been minimized as much as possible? \*\* (Detention Device or CMP type) ☐ Yes ☐ No
8. Is 150 mm (6 inches) separation provided between the top of the captured traction sand and the outlet from the device, in order to minimize re-suspension of the solids? \*\* (CMP type) ☐ Yes ☐ No

<b>Treatment BMPs</b> <b>Checklist T-1, Part 8</b>		
Prepared by: _____	Date: _____	District-Co-Route: _____
KP (PM): _____	EA: _____	
RWQCB: _____		

## Media Filters

Caltrans has approved two types of Media Filter: Austin Sand Filters and Delaware Filters. Austin Sand filters are typically designed for larger drainage areas, while Delaware Filters are typically designed for smaller drainage areas. The Austin Sand Filter is constructed with an open top and may have a concrete or earthen invert, while the Delaware is always constructed in as a vault. See Appendix B, Media Filters, for a further description of Media Filters.

### Feasibility – Austin Sand Filter

1. Is the volume of the Austin Sand Filter equal to at least the WQV using a 40 to 48 hour drawdown? (Note: the WQV must be  $\geq 123\text{m}^3$  [0.1 acre-feet]) ☐ Yes ☐ No

2. Is there sufficient hydraulic head to operate the device (minimum 0.9 m [3 ft] between the inflow and outflow chambers)? ☐ Yes ☐ No

If No to either question above, then an Austin Sand Filter is not feasible.

3. Does adequate area exist within the right-of-way to place an Austin Sand Filter(s)? ☐ Yes ☐ No  
 If Yes, continue to Design Elements sections. If No, continue to Question 4.

4. If adequate area does not exist within right-of-way, can suitable, additional right-of-way be acquired to site the device and how much right-of way would be needed to treat WQV? \_\_\_\_\_ ha (ac) ☐ Yes ☐ No  
 If Yes, continue to the Design Elements section.  
 If No, continue to Question 5.

5. If adequate area cannot be obtained, document in Section 5 of the SWDR that the inability to obtain adequate area prevents the incorporation of this Treatment BMP into the project. ☐ Complete

If an Austin Sand Filter meets these feasibility requirements, continue to the Design Elements – Austin Sand Filter below.



### Feasibility- Delaware Filter

1. Is the volume of the Delaware Filter equal to at least the WQV using a 40 to 48 hour drawdown? (Note: the WQV must be  $\geq 123\text{m}^3$  [0.1 acre-feet], consult with District/Regional NPDES if a lesser volume is under consideration.) ☐ Yes ☐ No
2. Is there sufficient hydraulic head to operate the device (minimum 0.9 m [3 ft] between the inflow and outflow chambers)? ☐ Yes ☐ No
3. Would a permanent pool of water be allowed by the local vector control agency? ☐ Yes ☐ No

If No to any question, then a Delaware Filter is not feasible

4. Does adequate area exist within the right-of-way to place a Delaware Filter (s)?  
If Yes, continue to Design Elements sections. If No, continue to Question 5. ☐ Yes ☐ No
5. If adequate area does not exist within right-of-way, can suitable, additional right-of-way be acquired to site the device and how much right-of way would be needed to treat WQV? \_\_\_\_\_ ha (ac) ☐ Yes ☐ No  
If Yes, continue to the Design Elements section. If No, continue to Question 6.
6. If adequate area cannot be obtained, document in Section 5 of the SWDR that the inability to obtain adequate area prevents the incorporation of this Treatment BMP into the project. ☐ Complete

If a Delaware Filter is still under consideration, continue to the Design Elements – Delaware Filter section.

### Design Elements – Austin Sand Filter

**\* Required** Design Element – A “Yes” response to these questions is required to further the consideration of this BMP into the project design. Document a “No” response in Section 5 of the SWDR to describe why this Treatment BMP cannot be included into the project design.

**\*\* Recommended** Design Element – A “Yes” response is preferred for these questions, but not required for incorporation into a project design.

1. Is the drawdown time of the 2<sup>nd</sup> chamber between 40 and 48 hours? \* ☐ Yes ☐ No
2. Is access for Maintenance vehicles provided to the Austin Sand Filter? \* ☐ Yes ☐ No
3. Is a bypass/overflow provided for storms > WQV? \* ☐ Yes ☐ No
4. Is the flow path length to width ratio for the sedimentation chamber of the “full” Austin Sand Filter  $\geq 2:1$ ? \*\*
5. Can pretreatment be provided to capture sediment and litter in the runoff (such as using biofiltration)? \*\* ☐ Yes ☐ No
6. Can the Austin Sand Filter be placed using an earthen configuration? \*\*  
If No, go to Question 8. ☐ Yes ☐ No



7. Is the Austin Sand Filter invert separated from the seasonally high groundwater table by  $\geq 3\text{m}$ ? \* ☐ Yes ☐ No  
If No, design with an impermeable liner.
8. Can the Austin Sand Filter be placed in an offline configuration? \*\* ☐ Yes ☐ No

### **Design Elements – Delaware Filter**

\* **Required** Design Element – A “Yes” response to these questions is required to further the consideration of this BMP into the project design. Document a “No” response in Section 5 of the SWDR to describe why this Treatment BMP cannot be included into the project design.

\*\* **Recommended** Design Element – A “Yes” response is preferred for these questions, but not required for incorporation into a project design.

1. Can the first chamber be sized for the WQV? \* ☐ Yes ☐ No
2. Is the drawdown time of the 2<sup>nd</sup> chamber between 40 and 48 hours? \* ☐ Yes ☐ No
3. Is access for Maintenance vehicles provided to the Delaware Filter? \* ☐ Yes ☐ No
4. Is a bypass/overflow provided for storms > WQV? \*\* ☐ Yes ☐ No
5. Can pretreatment be provided to capture sediment and litter in the runoff (such as using biofiltration)? \*\* ☐ Yes ☐ No
6. Can the Delaware Filter be placed in an offline configuration? \*\* ☐ Yes ☐ No

<b>Treatment BMPs</b> <b>Checklist T-1, Part 9</b>		
Prepared by: _____	Date: _____	District-Co-Route: _____
KP (PM): _____	EA: _____	
RWQCB: _____		

### MCTT (Multi-chambered Treatment Train)

#### Feasibility

1. Is the proposed location for the MCTT located to serve a "critical source area" (i.e. vehicle service facility, parking area, paved storage area, or fueling station)? ☐ Yes ☐ No
2. Is the WQV  $\geq 123 \text{ m}^3$ ? ☐ Yes ☐ No
3. Would a permanent pool of water be allowed by the local vector control agency? ☐ Yes ☐ No  
If No to any question above, then an MCTT is not feasible.
4. Does adequate area exist within the right-of-way to place an MCTT(s)? ☐ Yes ☐ No  
If Yes, continue to Design Elements sections. If No, continue to Question 5.
5. If adequate area does not exist within right-of-way, can suitable, additional right-of-way be acquired to site the device and how much right-of way would be needed to treat WQV? \_\_\_\_\_ ha (ac) ☐ Yes ☐ No  
If Yes, continue to Design Elements section. If No, continue to Question 6.
6. If adequate area cannot be obtained, document in Section 5 of the SWDR that the inability to obtain adequate area prevents the incorporation of this Treatment BMP into the project. ☐ Complete

#### Design Elements

\* **Required** Design Element – A "Yes" response to these questions is required to further the consideration of this BMP into the project design. Document a "No" response in Section 5 of the SWDR to describe why this Treatment BMP cannot be included into the project design.

\*\* **Recommended** Design Element – A "Yes" response is preferred for these questions, but not required for incorporation into a project design.

1. Is the maximum depth of the 3rd chamber  $\leq 4 \text{ m}$  below ground surface and has Maintenance accepted this depth? \* ☐ Yes ☐ No
2. Is the drawdown time in the 3rd chamber between 40 and 48 hours? \* ☐ Yes ☐ No
3. Is access for Maintenance vehicles provided to the MCTT? \* ☐ Yes ☐ No
4. Is there sufficient hydraulic head to operate the device? \* ☐ Yes ☐ No
5. Has a bypass/overflow been provided for storms  $> \text{WQV}$ ? \* ☐ Yes ☐ No
6. Can pretreatment be provided to capture sediment and litter in the runoff (such as using biofiltration)? \*\* ☐ Yes ☐ No

## Treatment BMPs Checklist T-1, Part 10

Prepared by: \_\_\_\_\_ Date: \_\_\_\_\_ District-Co-Route: \_\_\_\_\_  
 KP (PM): \_\_\_\_\_ EA: \_\_\_\_\_  
 RWQCB: \_\_\_\_\_

### Wet Basin

#### Feasibility

1. Is the volume of the Wet Basin above the permanent pool equal to at least the WQV using a 40 to 48 hour drawdown? (Note: the WQV must be  $\geq 123\text{m}^3$  [0.1 acre-feet] and the permanent pool must be at least 3x the WQV.) ☐ Yes ☐ No

2. Is a permanent source of water available in sufficient quantities to maintain the permanent pool for the wet basin? ☐ Yes ☐ No

Answer either question 3 or question 4:

3. For Wet Basins with a proposed invert above the seasonally high groundwater, Are NRCS Hydrologic Soil Groups [HSG] C and D at the proposed invert elevation, or can an impermeable liner be used? (Note: If an impermeable liner is used, the seasonally high groundwater elevation must not encroach within 300 mm (12 in) of the invert.) ☐ Yes ☐ No

4. For Wet Basins with a proposed invert below the groundwater table: Can written approval from the local Regional Water Quality Control Board be obtained to place the wet basin in direct hydraulic connectivity to the groundwater? ☐ Yes ☐ No

5. Would a permanent pool of water be allowed by the local vector control agency? ☐ Yes ☐ No

If No to any question above, then a Wet Basin is not feasible.

6. Does adequate area exist within the right-of-way to place a Wet Basin?  
 If Yes, continue to Design Elements sections. ☐ Yes ☐ No

If No, continue to Question 7.

7. If adequate area does not exist within right-of-way, can suitable, additional right-of-way be acquired to site the device and how much right-of way would be needed to treat WQV? \_\_\_\_\_ ha (ac) ☐ Yes ☐ No  
 If Yes, continue to Design Elements section.

If No, continue to Question 8.

8. If adequate area cannot be obtained, document in Section 5 of the SWDR that the inability to obtain adequate area prevents the incorporation of this Treatment BMP into the project. ☐ Complete



### Design Elements

\* **Required** Design Element – A “Yes” response to these questions is required to further the consideration of this BMP into the project design. Document a “No” response in Section 5 of the SWDR to describe why this Treatment BMP cannot be included into the project design.

\*\* **Recommended** Design Element – A “Yes” response is preferred for these questions, but not required for incorporation into a project design.

- |  |                              |                             |
|--|------------------------------|-----------------------------|
| 1. Can a controlled outlet and an overflow structure be designed for storm events larger than the WQV? *                     | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| 2. Is access for Maintenance vehicles provided? *  | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| 3. Is the drawdown time for WQV events between 24 and 72 hours? *  | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| 4. Has appropriate vegetation been selected for each hydrologic zone? *  | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| 5. Can all design elements required by the local vector control agency be incorporated? *                                    | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| 6. Has a minimum flow path length-to-width ration of at least 2:1 been provided? **  | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| 7. Has an upstream bypass been provided for storms > WQV? **   | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| 8. Can pretreatment be provided to capture sediment and litter in the runoff (such as using biofiltration, or a forebay)? ** | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| 9. Can public access be restricted using a fence if proposed at locations accessible on foot by the public? **               | <input type="checkbox"/> Yes | <input type="checkbox"/> No |

### Construction Site BMPs Checklist CS-1, Part 1

Prepared by: \_\_\_\_\_ Date: \_\_\_\_\_ District-Co-Route: \_\_\_\_\_  
 KP (PM): \_\_\_\_\_ EA: \_\_\_\_\_  
 RWQCB: \_\_\_\_\_

#### Soil Stabilization

##### General Parameters

1. How many rainy seasons are anticipated between begin and end of construction? \_\_\_\_\_
2. What is the total disturbed soil area for the project? (ha/ac) \_\_\_\_\_
  - (a) How much of the project DSA consists of slopes 1V:4H or flatter? (ha/ac) \_\_\_\_\_
  - (b) How much of the project DSA consists of 1V:4H < slopes < 1V:2H? (ha/ac) \_\_\_\_\_
  - (c) How much of the project DSA consists of slopes 1V:2H and steeper? (ha/ac) \_\_\_\_\_
  - (d) How much of the project DSA consists of slopes with slope lengths longer than 6 m (20 ft)? (ha/ac) \_\_\_\_\_
3. What rainfall area does the project lie within? (Refer to Table 2-1 of the Construction Site Best Management Practices Manual ) \_\_\_\_\_
4. Review the required combination of temporary soil stabilization and temporary sediment controls and barriers for area, slope inclinations, rainy and non-rainy season, and active and non-active disturbed soil areas. (Refer to Tables 2-2, and 2-3 of the Construction Site Best Management Practices Manual for Rainfall Area requirements.) ☐ Complete

##### Scheduling (SS-1)

5. Does the project have a duration of more than one rainy season and have disturbed soil area in excess of 10 ha (25 acres)? ☐ Yes ☐ No
  - (a) Include multiple mobilizations (Move-in/Move-out) as a separate contract bid line item to implement permanent erosion control or revegetation work on slopes that are substantially complete. (Estimate at least 6 mobilizations for each additional rainy season. Designated Construction Representative may suggest an alternate number of mobilizations.) ☐ Complete
  - (b) Edit Order of Work specifications for permanent erosion control or revegetation work to be implemented on slopes that are substantially complete. ☐ Complete
  - (c) Edit permanent erosion control or revegetation specifications to require seeding and planting work to be performed when optimal. ☐ Complete



### Preservation of Existing Vegetation (SS-2)

6. Do Environmentally Sensitive Areas (ESAs) exist within or adjacent to the project limits? (Verify the completion of DPP-1, Part 5) ☐ Yes ☐ No
  - (a) Verify the protection of ESAs through delineation on all project plans. ☐ Complete
  - (b) Protect from clearing and grubbing and other construction disturbance by enclosing the ESA perimeter with high visibility plastic fence or other BMP. ☐ Complete
7. Are there areas of existing vegetation (mature trees, native vegetation, landscape planting, etc.) that need not be disturbed by project construction? Will areas designated for proposed treatment BMPs need protection (infiltration characteristics, vegetative cover, etc.)? (Coordinate with District Environmental and Construction to determine limits of work necessary to preserve existing vegetation to the maximum extent possible.) ☐ Yes ☐ No
  - (a) Designate as outside of limits of work (or designate as ESAs) and show on all project plans. ☐ Complete
  - (b) Protect with high visibility plastic fence or other BMP. ☐ Complete
8. If yes for 6, 7, or both, then designate ESA fencing as a separate contract bid line item, *if not already incorporated as part of design pollution prevention work (See DPP-1, Part 5).* ☐ Complete

### Slope Protection

9. Provide a soil stabilization BMP(s) appropriate for the DSA, slope steepness, slope length, and soil erodibility. (Consult with District/Regional Landscape Architect.)
  - (a) Select SS-3 (Hydraulic Mulch), SS-4 (Hydroseeding), SS-5 (Soil Binders), SS-6 (Straw Mulch), SS-7 (Geotextiles, RECPs, Etc.), SS-8 (Wood Mulching), other BMPs or a combination to cover the DSA throughout the project's rainy season. ☐ Complete
  - (b) Increase the quantities by 25% for each additional rainy season. (Designated Construction Representative may suggest an alternate increase.) ☐ Complete
  - (c) Designate as a separate contract bid line item. ☐ Complete

### Slope Interrupter Devices

10. Provide slope interrupter devices for all slopes with slope lengths equal to or greater than of 6 m (20 ft) in length. (Consult with District/Regional Landscape Architect and Designated Construction Representative.)
  - (a) Select SC-5 (Fiber Rolls) or other BMPs to protect slopes throughout the project's rainy season. ☐ Complete
  - (b) For slope inclination of 1V:4H and flatter, SC-5 (Fiber Rolls) or other BMPs shall be placed along the contour and spaced 6.0 m (20 ft) on center. ☐ Complete
  - (c) For slope inclination between 1V:4H and 1V:2H, SC-5 (Fiber Rolls) or other BMPs shall be placed along the contour and spaced 4.5 m (15 ft) on center. ☐ Complete
  - (d) For slope inclination of 1V:2H and greater, SC-5 (Fiber Rolls) or other BMPs shall be placed along the contour and spaced 3.0 m (10 ft) on center. ☐ Complete
  - (e) Increase the quantities by 25% for each additional rainy season. (Designated Construction Representative may suggest alternate increase.) ☐ Complete
  - (f) Designate as a separate contract bid line item. ☐ Complete

### Channelized Flow

11. Identify locations within the project site where concentrated flow from stormwater runoff can erode areas of soil disturbance. Identify locations of concentrated flow that enters the site from outside of the right of way (off-site run-on). ☐ Complete
  - (a) Utilize SS-7 (Geotextiles, RECPs, etc.), SS-9 (Earth Dikes/Swales, Ditches), SS-10 (Outlet Protection/Velocity Dissipation), SS-11 (Slope Drains), SC-4 (Check Dams), or other BMPs to convey concentrated flows in a non-erosive manner. ☐ Complete
  - (b) Designate as a separate contract bid line item. ☐ Complete

### Construction Site BMPs Checklist CS-1, Part 2

Prepared by: \_\_\_\_\_ Date: \_\_\_\_\_ District-Co-Route: \_\_\_\_\_  
 KP (PM): \_\_\_\_\_ EA: \_\_\_\_\_  
 RWQCB: \_\_\_\_\_

#### Sediment Control

##### Perimeter Controls - Run-off Control

1. Is there a potential for sediment laden sheet and concentrated flows to discharge offsite from runoff cleared and grubbed areas, below cut slopes, embankment slopes, etc.? ☐ Yes ☐ No
  - (a) Select linear sediment barrier such as SC-1 (Silt Fence), SC-5 (Fiber Rolls), SC-6 (Gravel Bag Berm), SC-8 (Sand Bag Barrier), SC-9 (Straw Bale Barrier), or a combination to protect wetlands, water courses, roads (paved and unpaved), construction activities, and adjacent properties. (Coordinate with District Construction for selection and preference of linear sediment barrier BMPs.) ☐ Complete
  - (b) Increase the quantities by 25% for each additional rainy season. (Designated Construction Representative may suggest an alternate increase.) ☐ Complete
  - (c) Designate as a separate contract bid line item. ☐ Complete

##### Perimeter Controls - Run-on Control

2. Do locations exist where sheet flow upslope of the project site and where concentrated flow upstream of the project site may contact DSA and construction activities? ☐ Yes ☐ No
  - (a) Utilize linear sediment barriers such as SS-9 (Earth Dike/Drainage Swales and Lined Ditches), SC-5 (Fiber Rolls), SC-6 (Gravel Bag Berm), SC-8 (Sand Bag Barrier), SC-9 (Straw Bale Barrier), or other BMPs to convey flows through and/or around the project site. (Coordinate with District Construction for selection and preference of perimeter control BMPs.) ☐ Complete
  - (b) Designate as a separate contract bid line item. ☐ Complete



### Storm Drain Inlets

3. Do existing or proposed drainage inlets exist within the project limits? ☐ Yes ☐ No
  - (a) Select SC-10 (Storm Drain Inlet Protection) to protect municipal storm drain systems or receiving waters wetlands at each drainage inlet. (Coordinate with District Construction for selection and preference of inlet protection BMPs.) ☐ Complete
  - (b) Designate as a separate contract bid line item. ☐ Complete
4. Can existing or proposed drainage inlets utilize an excavated sediment trap as described in SC-10 (Storm Drain Inlet Protection- Type 2)? ☐ Yes ☐ No
  - (a) Include with other types of SC-10 (Storm Drain Inlet Protection). ☐ Complete

### Sediment/Desilting Basin (SC-2)

5. Does the project lie within a Rainfall Area where the required combination of temporary soil stabilization and sediment control BMPs includes desilting basins? (Refer to Tables 2-1, 2-2, and 2-3 of the Construction Site Best Management Practices Manual for Rainfall Area requirements.) ☐ Yes ☐ No
  - (a) Consider feasibility for desilting basin allowing for available right-of-way within the project limits, topography, soil type, disturbed soil area within the watershed, and climate conditions. Document if the inclusion of sediment/desilting basins is infeasible. ☐ Complete
  - (b) If feasible, design desilting basin(s) per the guidance in SC-2 Sediment/Desilting Basins of the Construction Site BMP Manual to maximize capture of sediment laden runoff. ☐ Complete
  - Designate as a separate contract bid item. ☐ Complete
6. Will the project benefit from the early implementation of proposed permanent Treatment BMPs? (Coordinate with District Construction.) ☐ Yes ☐ No
  - (a) Edit Order of Work specifications for permanent treatment BMP work to be implemented in a manner that will allow its use as a construction site BMP. ☐ Complete

### Sediment Trap (SC-3)

7. Can sediment traps be located within collected or channelized runoff from disturbed soil areas prior to discharge? ☐ Yes ☐ No
  - (a) Design sediment traps in accordance with the Construction Site BMP Manual. ☐ Complete
  - (b) Designate as a separate contract bid line item. ☐ Complete

### Construction Site BMPs Checklist CS-1, Part 3

Prepared by: \_\_\_\_\_ Date: \_\_\_\_\_ District-Co-Route: \_\_\_\_\_  
 KP (PM): \_\_\_\_\_ EA: \_\_\_\_\_  
 RWQCB: \_\_\_\_\_

#### Tracking Controls

##### Stabilized Construction Entrance/Exit (TC-1)

1. Are there points of entrance and exit from the project site to paved roads where mud and dirt could be transported offsite by construction equipment? (Coordinate with District Construction for selection and preference of tracking control BMPs.) ☐ Yes ☐ No
  - (a) Identify and designate these entrance/exit points as stabilized construction entrances (TC-1). ☐ Complete
  - (b) Designate as a separate contract bid line item. ☐ Complete

##### Tire/Wheel Wash (TC-3)

2. Are site conditions anticipated that would require additional or modified tracking controls such as entrance/outlet tire wash? (Coordinate with District Construction.) ☐ Yes ☐ No
 

Designate as a separate contract bid line item. ☐ Complete

##### Stabilized Construction Roadway (TC-2)

3. Are temporary access roads necessary to access remote construction activity locations or to transport materials and equipment? (In addition to controlling dust and sediment tracking, access roads limit impact to sensitive areas by limiting ingress, and provide enhanced bearing capacity.) (Coordinate with District Construction.) ☐ Yes ☐ No
  - (a) Designate these temporary access roads as stabilized construction roadways (TC-2). ☐ Complete
  - (b) Designate as a separate contract bid line item. ☐ Complete

##### Street Sweeping and Vacuuming (SC-7)

4. Is there a potential for tracked sediment or construction related residues to be transported offsite and deposited on public or private roads? (Coordinate with District Construction for preference of including street sweeping and vacuuming with tracking control BMPs.) ☐ Yes ☐ No
 

Designate as a separate contract bid line item. ☐ Complete



### Construction Site BMPs Checklist CS-1, Part 4

Prepared by: \_\_\_\_\_ Date: \_\_\_\_\_ District-Co-Route: \_\_\_\_\_  
 KP (PM): \_\_\_\_\_ EA: \_\_\_\_\_  
 RWQCB: \_\_\_\_\_

#### Wind Erosion Controls

##### Wind Erosion Control (WE-1)

1. Is the project located in an area where standard dust control practices in accordance with Standard Specifications, Section 10: Dust Control, are anticipated to be inadequate during construction to prevent the transport of dust offsite by wind? ☐ Yes ☐ No  
*(Note: Dust control by water truck application is paid for through the various items of work. Dust palliative, if it is included, is paid for as a separate item.)*
- (a) Select SS-3 (Hydraulic Mulch), SS-4 (Hydroseeding), SS-5 (Soil Binders), SS-7 (Geotextiles, Plastic Covers, & Erosion Control Blankets/Mats), SS-8 (Wood Mulching) or a combination to cover the DSA subject to wind erosion year-round, especially when significant wind and dry conditions are anticipated during project construction. (Coordinate with District Construction for selection and preference of wind erosion control BMPs.) ☐ Complete
- (b) Designate as a separate contract bid line item. ☐ Complete



### Construction Site BMPs Checklist CS-1, Part 5

Prepared by: \_\_\_\_\_ Date: \_\_\_\_\_ District-Co-Route: \_\_\_\_\_  
 KP (PM): \_\_\_\_\_ EA: \_\_\_\_\_  
 RWQCB: \_\_\_\_\_

#### Non-Storm Water Management

##### Temporary Stream Crossing (NS-4) & Clear Water Diversion (NS-5)

1. Will construction activities occur within a waterbody or watercourse such as a lake, wetland, or stream? (Coordinate with District Construction for selection and preference for stream crossing and clear water diversion BMPs.) ☐ Yes ☐ No
  - (a) Select from types offered in NS-4 (Temporary Stream Crossing) to provide access through watercourses consistent with permits and agreements.<sup>1</sup> ☐ Complete
  - (b) Select from types offered in NS-5 (Clear Water Diversion) to divert watercourse consistent with permits and agreements.<sup>1</sup> ☐ Complete
  - (c) Designate as a separate contract bid line item(s). ☐ Complete

##### Other Non-Storm Water Management BMPs

2. Are construction activities anticipated that will generate wastes or residues with the potential to discharge pollutants? ☐ Yes ☐ No
  - (a) Identify potential pollutants associated with the anticipated construction activity and select the corresponding BMP such as NS-1 (Water Conservation Practices), NS-2 (Dewatering Operations), NS-3 (Paving and Grinding Operations), NS-7 (Potable Water/Irrigation), NS-8 (Vehicle and Equipment Cleaning), NS-9 (Vehicle and Equipment Fueling), NS-10 (Vehicle and Equipment Maintenance), NS-11 (Pile Driving Operations), NS-12 (Concrete Curing), NS-13 (Material and Equipment Use Over Water), NS-14 (Concrete Finishing), and NS-14 (Structure Demolition/Removal Over or Adjacent to Water).<sup>1</sup> ☐ Complete
  - (b) Verify that costs for non-storm water management BMPs are identified in the contract documents. Designate BMP as a separate contract bid line item if requested by Construction. ☐ Complete

1. Coordinate with District Environmental for consistency with US Army Corps of Engineers 404 permit and Dept. of Fish and Game 1601 Streambed alteration Agreements.

## Construction Site BMPs Checklist CS-1, Part 6

Prepared by: \_\_\_\_\_ Date: \_\_\_\_\_ District-Co-Route: \_\_\_\_\_  
 KP (PM): \_\_\_\_\_ EA: \_\_\_\_\_  
 RWQCB: \_\_\_\_\_

### Waste Management & Materials Pollution Control

#### Concrete Waste Management (WM-8)

1. Does the project include concrete pours or mortar mixing? ☐ Yes ☐ No
  - (a) Select from types offered in WM-8 (Concrete Waste Management) to provide concrete washout facilities. In addition, consider portable concrete washouts and vendor supplied concrete waste management services. (Coordinate with District Construction for selection and preference of waste management and materials pollution control BMPs.) ☐ Complete
  - (b) Designate as a separate contract bid line item. ☐ Complete

#### Other Waste Management and Materials Pollution Controls

2. Are construction activities anticipated that will generate wastes or residues with the potential to discharge pollutants? ☐ Yes ☐ No
  - (a) Identify potential pollutants associated with the anticipated construction activity and select the corresponding BMP such as WM-1 (Material Delivery and Storage), WM-2 (Material Use), WM-4 (Spill Prevention and Control), WM-5 (Solid Waste Management), WM-6 (Hazardous Waste Management), WM-7 (Contaminated Soil Management), WM-9 (Sanitary/Septic Waste Management) and WM-10 (Liquid Waste Management) ☐ Complete
  - (b) Verify that costs for waste management and materials pollution control BMPs are identified in the contract documents. Designate BMP as a separate contract bid line item if requested by Construction. ☐ Complete

#### Temporary Stockpiles (Soil, Materials, and Wastes)

3. Are stockpiles of soil, etc. anticipated during construction? ☐ Yes ☐ No
  - (a) Select WM-3 (Stockpile Management), SS-3 (Hydraulic Mulch), SS-4 (Hydroseeding), SS-5 (Soil Binders), SS-7 (Geotextiles, RECPs etc.), or a combination as appropriate to cover temporary stockpiles of soil, etc. ☐ Complete
  - (b) Select linear sediment barrier such as SC-1 (Silt Fence), SC-5 (Fiber Rolls), SC-6 (Gravel Bag Berm), SC-8 (Sand Bag Barrier), SC-9 (Straw Bale Barrier), or a combination to encircle temporary stockpiles of soil, etc. (Coordinate with District Construction for selection and preference of BMPs related to stockpiles.) ☐ Complete
  - (c) Designate as a separate contract bid line item. ☐ Complete



4. Is there a potential for dust and debris from construction material (fill material, etc.) and waste (concrete, contaminated soil, etc.) stockpiles to be transported offsite by wind? ☐ Yes ☐ No
- (a) Select SS-7, temporary cover, plastic sheeting or other BMP to cover stockpiles subject to wind erosion year-round, especially when significant wind and dry conditions are anticipated during project construction. (Coordinate with District Construction for selection and preference of wind erosion control BMPs.) ☐ Complete
- (b) Designate as a separate contract bid line item. ☐ Complete